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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,070	07/11/2001	Tae-hun Shim	5649-885	9380

20792 7590 06/19/2003

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EXAMINER

STASHICK, ANTHONY D

ART UNIT	PAPER NUMBER
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3728

DATE MAILED: 06/19/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/903,070

Applicant(s)

Shim et al.

Examiner

Anthony D. Stashick

Art Unit

3728

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 23, 2003 has been entered.

***Claim Rejections - 35 USC § 112***

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It appears the claims do not positively recite the wafers in the body of the claims. The independent claims recite "a cassette in which wafers are inserted", but the claims do not claim the wafers themselves, only the cassette in which they are stored and not necessarily with the wafer placed within the cassette. Also, claim 2 contains the word "wavers" in line 2 of the claim. IT appears that this word should be spelled --wafers-- as previously noted.

Art Unit: 3728

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks 6,155,027 in view of Weder 6,397,560 and Titchenal et al. Re. 30,098. Brooks '027 discloses substantially all the limitations including the following: providing a carrying device 11 that holds semiconductor wafers W; inserting the carrying device into a packing bag (see Figure 6 or col. 6, line 9-col. 7, line 29); closing the packing by forming the bag around the carrying device; packing the wafer holder inside the first bag into a second bag (see col. 7, lines 23-29); sealing the first bag so that the device remains in communication with the environment external the first bag (through the port 50); folding a first portion of the bag to seal it (see other sealed end of bag in Figure 6, seal on second side would be done the same, folding along dashed line.).

Art Unit: 3728

Brooks '027 does not specifically teach the sealing of the bag by applying forces to an outer surface of the packing bag opposite the cassette so as to press the packing bag against an external form of the cassette and adhering the bag to the external form of the cassette however Brooks '027 does teach the desire to have the bag closed by forming it around the cassette. Weder '560 teaches that forming it around the package, which is placed within the bag, by applying external pressure to the bag and forming it to the package located within it can close a bag. Titchenal et al. '098 teaches that a bag can be tightly fitted to the package held within the bag, thereby hermetically sealing the bag, by having an adhesive layer on the inside of the bag that allows for the bag to adhere to the form of the package held within it. Therefore, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to make the bag of Brooks '027 conform to the cassette located within the bag by applying an external force on the outside of the bag, as taught by Weder '560, and allowing the bag to have an internal adhesive layer that attaches the bag to the form of the cassette and hermetically sealing the bag, as taught by Titchenal et al. '098, to prevent any contamination of the wafer located within the bag.

Art Unit: 3728

5. Claims 1, 2, 6, 11, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied above in view of Gillio-tos et al. 4,611,456. The references as applied above disclose all the limitations of the claims except for the trimming or cutting of the unnecessary border. Gillio-tos et al. '456 teaches that it is desirable to trim the excess material in packaging a product in order to recover the flash or excess material that extends past the product. Therefore, it would have been obvious to trim the excess material of the bag of the references as applied above to recover the excess material for possible reuse later. With respect to claims 2 and 20, it appears that it would have been obvious to make the container for any sized wafer, including 300 mm wafers, which are well known in the art.

6. Claims 3-5, 7-10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied in paragraph 5 above in view of Schirmer 4,928,474. The references as applied in paragraph 5 above disclose all the limitations of the claims except for the different materials of the multiple bags used and sealing the first bag loosely around the cassette. Schirmer '474 teaches that a product covered with multiple coverings (multiple bags) can have an inner covering made of polypropylene and a metal foil (such as aluminum) as an

Art Unit: 3728

outer covering (see col. 3, Summary of the Invention). The inner layer of polypropylene allows for dissipation of moisture from the product through the layer, while the outer layer of aluminum prevents oxygen from entering the container.

Therefore, it would have been obvious to make the inner bag of the references as applied in paragraph 5 above out of polypropylene and the outer bag out of aluminum, as taught by Schirmer '474, to allow for any trapped moisture to escape from within the inner bag and prevent oxygen from entering the bag and contaminating the product. With respect to claim 8, it appears that it would have been obvious to make the container for any sized wafer, including 300 mm wafers, which are well known in the art.

7. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 12 above in view of Cho et al. 6,170,235. The references as applied to claim 12 above disclose all the limitations of the claims except for the packaging being done in a packing room on the same level as a wafer clean room and the wafers being cleaned before packing. Cho et al. '235 teaches that wafers can be cleaned and then packed before there is a specific amount of sulphuric oxide buildup on the wafer. Cho et al. '235 also teaches that this packaging can be done in a clean room that is

Art Unit: 3728

at least a Class 10 clean room, the same level used for wafers. Therefore, it would have been obvious to clean and package the wafers in a clean room as taught by Cho et al. '235, to prevent any corrosion to the wafers before and during packaging.

### *Response to Arguments*

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are cited on form 892 enclosed herewith.

Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, "should be directed to the group clerical personnel and not to the examiners. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information without contacting the examiners", M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, email [CustomerService3700@uspto.gov](mailto:CustomerService3700@uspto.gov).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony D. Stashick whose telephone number is 703-308-3876. The examiner can normally be reached on Monday-Thursday, 6:00 am until 4:30 pm.

Art Unit: 3728

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mickey Yu can be reached on 703-308-2672. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 305-8322
Assignment Branch	(703) 308-9287
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/8335
Fee Increase Questions	(703) 305-5125
Intellectual Property Questions	(703) 305-8217
Petitions/Special Programs	(703) 305-9282
Terminal Disclaimers	(703) 305-8408
Informal Fax for 3728	(703) 308-7769

If the information desired is not provided above, or has been changed, please do not call the examiner (this is the latest information provided to him) but the general information help line below.

Information Help line	1-800-786-9199
Internet PTO-Home Page	<a href="http://www.uspto.gov/">http://www.uspto.gov/</a>



Anthony D. Stashick  
Primary Examiner  
Art Unit 3728

ADS  
June 14, 2003